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GARLICK HARRISON & MARKISON LLP
P.O. BOX 160727
AUSTIN, TX 78716-0727

| EXAMINER | |
|---|---|
| RYMAN, DANIEL J | |
| ART UNIT | PAPER NUMBER |
| 2616 | |

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/748,069 | O'SULLIVAN ET AL. | |
| | Examiner | Art Unit | |
| | Daniel J. Ryman | 2665 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,3-18,29-32 and 39-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-18,29-32 and 39-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 27 February 2006 have been fully considered but they are not persuasive. On page 9 of the Response, Applicant presumably asserts that Shenkman does not anticipate claim 29 since Shenkman discloses a "call center" rather than a "call center controller." Examiner, respectfully, disagrees. Newton's Telecom Dictionary defines "controller" as "a device between a host and terminals that relays information between them" where "host" is defined as "[a]n intelligent device attached to a network" and "terminal" is defined as: (1) "[t]he point at which a telephone line ends" or (2) "[a]n input/output device for communicating with computers." Shenkman discloses call center equipment (ref. 29, 86, 83, 82, 27: collectively the "controller") positioned between a router (ref. 21: "host") and PSTN switch (ref. 19: "host") and agent stations (ref. 31, 33, 35, 37: "terminals") that relay information between the router and switch and the agent stations. As such, Examiner maintains that Shenkman discloses a "call center controller."

2. On page 10 of the Response, Applicant asserts, with respect to claim 31, that Shenkman teaches away from the claimed limitation since Shenkman teaches that "[u]nder heavy call-load situations, a dual gateway such as would be the case with gateway 71 may become congested and cause delay." (Shenkman: col. 7, lines 40-42). This gateway, as can be seen in Fig. 2, converts all COST calls to IP calls. However, claim 31 does not require such a gateway. Rather, claim 31 only requires a module to convert between COST and IP calls where this module is "responsive" to the IP interface. As outlined in the Office Action, Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to place the

domain conversion module before the phone so that only a single IP phone or COST phone is needed to receive calls, depending on how the conversion is performed. In this situation, a domain conversion module would be placed on the interface to each phone as desired such that the congestion concerns of Shenkman are not an issue. As such, Examiner maintains that Shenkman does not teach against using a domain conversion module.

3. On pages 11-13, Applicant asserts that Shenkman does not disclose that the call center controller sends circuit-switched instruction messages to the circuit-switched private branch exchange or that the call center controller sends packet-switched instruction messages to the packet-switched private branch exchange. Examiner, respectfully, disagrees. Shenkman discloses that the circuit switched private branch exchange (ref. 27) and the packet switched private branch exchange (ref. 29) "adher[e] to the separate network-architecture." Shenkman, column 5, line 65-column 6, line 7 and column 8, lines 11-14. As such, it is implicit that these devices communicate using their respective network signaling. Shenkman also discloses that the call center controller (ref. 83) controls both the circuit switched private branch exchange (ref. 27) and the packet switched private branch exchange (ref. 29). Shenkman, column 8, lines 15-20. Since the circuit switched and packet switched devices adhere to their separate network-architectures and since the call center controller controls both devices, Shenkman discloses that the call center controller sends circuit-switched instruction messages to the circuit-switched private branch exchange and that the call center controller sends packet-switched instruction messages to the packet-switched private branch exchange, where these instructions are sent in a format understood by each device in order to control the device.

4. In view of the foregoing, Examiner maintains that the claims are anticipated or rendered obvious by the cited prior art.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 29 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Shenkman et al. (USPN 6,389,007), of record.

7. Regarding claim 29, Shenkman discloses a network spanning heterogeneous call center controller comprising: a public switched telephone network input (ref. 13); an internet connection input (ref. 15); a switching element responsive to the public switched telephone network input (ref. 27); an internet protocol interface responsive to the internet connection input (ref. 29); a telephony resource module connectable to the switching element (ref. 86); a processor (ref. 83), the processor coupled to a data bus (refs. 81 and 85), the data bus coupled to the internet protocol interface and the switching element (col. 7, line 59-col. 8, line 31); a first set of agent output channels (ref. 56) responsive to the switching element, the first set of agent output channels directed to communicate with circuit switched agent terminals (col. 7, line 59-col. 8, line 31); and a second set of agent output channels (ref. 55) responsive to the internet protocol interface, the second set of agent output channels directed to communicate with internet enabled agent terminals (col. 7, line 59-col. 8, line 31).

8. Regarding claim 30, Shenkman discloses a data resources module (ref. 86) to provide selected data resources via the internet protocol interface (Fig. 3 and col. 7, line 59-col. 8, line 31).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 3-18 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shenkman et al. (USPN 6,389,007), of record, in view of Servi et al. (USPN 6,115,462), of record.

11. Regarding claims 1 and 48, Shenkman discloses a network spanning heterogeneous call center controller (ref. 83) for use with a circuit-switched private branch exchange (ref. 27) and a packet-switched private branch exchange (router) (ref. 29), the network spanning heterogeneous call center controller comprising: a circuit-switched private branch exchange interface (interface between ref. 27 and 83) to communicate with the circuit-switched private branch exchange (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-20) where the circuit switch can be any type of switching device including a PBX (col. 1, lines 41-44 and col. 6, lines 4-7); a packet-switched private branch exchange interface (interface between ref. 29 and 83) to communicate with the packet-switched private branch exchange (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-20); and a processor (ref. 83) communicatively coupled to the circuit-switched private branch exchange interface and to the packet-switched private branch exchange interface (col. 8, lines 9-31),

wherein the circuit-switched private branch exchange interface sends circuit-switched instruction messages to the circuit-switched private branch exchange (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31) and wherein the packet switched private branch exchange sends packet-switched instruction messages to the packet switched private branch exchange (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

Shenkman does not expressly disclose a network manager interface communicatively coupled to and responsive to the processor. Servi teaches, in a call center system, using a network manager connected to a call center in order to efficiently route calls to a particular call center (abstract; col. 1, lines 28-36; and col. 2, lines 53-55) where the network manager uses statistics about a call center when making the routing decision (abstract and col. 4, lines 50-64). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a network manager interface communicatively coupled to and responsive to the processor in order to permit efficient routing of calls in the network.

12. Regarding claim 3, Shenkman in view of Servi discloses that the circuit-switched instruction messages include a message to transfer a circuit switched call to a selected agent terminal (Shenkman: col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

13. Regarding claim 4, Shenkman in view of Servi discloses that the agent terminal is coupled to the circuit-switched private branch exchange (Shenkman: Fig. 3 and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

14. Regarding claim 5, Shenkman in view of Servi discloses that the packet-switched instruction messages include a message to transfer a voice over internet protocol call to an internet enabled agent terminal (Shenkman: col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

15. Regarding claim 6, Shenkman in view of Servi discloses that the internet enabled agent terminal its connected to the packet-switched private branch exchange (Shenkman: Fig. 3 and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

16. Regarding claim 7, Shenkman in view of Servi discloses that the circuit-switched instruction messages include a message to place a circuit-switched call in a call queue (Shenkman: col. 3, lines 10-15).

17. Regarding claim 8, Shenkman in view of Servi discloses that the circuit-switched instruction messages include a message to apply a telephony resource (agent's phone) to a circuit-switched call (Shenkman: col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

18. Regarding claim 9, Shenkman in view of Servi does not expressly disclose that the telephony resource comprises a message to apply music on hold call treatment; however, Examiner takes official notice that it is well known in the art to play music for a caller while on hold in order to encourage the caller to stay on hold. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to play music for a caller while on hold in order to encourage the caller to stay on hold.

19. Regarding claim 10, Shenkman in view of Servi discloses that the circuit-switched call is a circuit switched voice call transmitted over the public switched telephone network (Shenkman: Fig. 3 and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

20. Regarding claim 11, Shenkman in view of Servi discloses that the packet-switched private branch exchange supports Internet Protocol telephony (Shenkman: Fig. 3; col. 2, lines 15-30; and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

21. Regarding claim 12, Shenkman in view of Servi discloses a network manager console coupled to and responsive to the network manager interface (Servi: abstract; col. 1, lines 28-36; and col. 2, lines 53-55).

22. Regarding claim 13, Shenkman in view of Servi discloses a peripheral interface (ref. 84); the peripheral interface coupled to the circuit-switched private brand exchange interface, the packet-switched private branch exchange interface, and to the processor (Shenkman: col. 7, line 59-col. 8, line 4).

23. Regarding claim 14, Shenkman in view of Servi discloses a memory, the memory coupled to the processor, the memory containing a plurality of network spanning heterogeneous command and control instructions (rules set by the company hosting center) (Shenkman: col. 8, line 21-32). Although Shenkman in view of Servi does not expressly disclose that the memory is connected to the processor via a bus, Examiner takes official notice that a bus is a well-known connection mechanism. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a bus as a connection mechanism since busses are simple connection mechanisms.

24. Regarding claim 15, Shenkman in view of Servi discloses a database (ref. 86: agent status table), the database containing a plurality of call records created for a plurality of calls serviced by network spanning heterogeneous call center controller (Shenkman: col. 8, line 21-32).

25. Regarding claim 16, Shenkman in view of Servi discloses that a first set of the data records are created for a first set of agents, and a second set of the data records are created for a second set of agents ("which agents are busy on calls (either COST or IPNT)") (Shenkman: col. 8, line 21-32).

26. Regarding claim 17, Shenkman in view of Servi suggests that the first set of data records contain a data entry indicating service for a first company (telephone company) and the second set of data records contain a data entry indicating service for a second company (internet service provider) (Shenkman: col. 2, lines 15-34 and col. 8, line 21-32).

27. Regarding claim 18, Shenkman in view of Servi discloses that the database is communicatively coupled to the processor (Shenkman: col. 8, line 21-32).

28. Claims 31, 32, and 39-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shenkman et al. (USPN 6,389,007), of record.

29. Regarding claim 31, Shenkman does not expressly disclose in the primary embodiment a domain conversion module, the domain conversion module to convert between internet protocol traffic and circuit switched voice traffic; the domain conversion module responsive to the internet protocol interface. However, Shenkman does disclose that it is known in the prior art to have a domain conversion module to convert between internet protocol traffic and circuit switched voice traffic where the domain conversion module is responsive to the internet protocol interface (Fig. 2 and col. 7, lines 13-31) where it is implicit that this allows a telephone to receive an Internet voice call or an Internet phone to receive a PSTN call. Shenkman also discloses, as an improvement to the primary embodiment, the use of hardware that will allow a single headset to receive a signal transmitted over either the PSTN or Internet (col. 8, lines 37-48). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have a domain conversion module, the domain conversion module to convert between internet protocol traffic and circuit switched voice traffic; the domain conversion module responsive to the

internet protocol interface in order to allow a telephone to receive an Internet voice call or an Internet phone to receive a PSTN call.

30. Regarding claim 32, Shenkman discloses a network spanning heterogeneous call center comprising: a circuit-switched private branch exchange (ref. 27) (col. 1, lines 41-44; col. 6, lines 4-7; and col. 8, lines 11-31); a packet-switched private branch exchange (ref. 29) (col. 8, lines 11-31); a network spanning heterogeneous call center controller (ref. 83) (col. 8, lines 11-31); a first control path (ref. 81) connecting the circuit switched private branch exchange and the network spanning heterogeneous call center controller (col. 8, lines 11-31); a second control path (ref. 85), connecting the packet-switched private branch exchange and the network spanning heterogeneous call center controller (col. 8, lines 11-31), wherein the network spanning heterogeneous call center controller sends circuit-switched instruction messages to the circuit-switched private branch exchange (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31) and the network spanning heterogeneous call center controller sends packet-switched instruction messages to the packet switched private branch exchange (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31); a network, the network responsive to the circuit-switched private branch exchange, to the packet-switched private branch exchange, and to the network spanning heterogeneous call center controller, the network having a plurality of output communication channels (ref. 55 and 56) for connection to a plurality of agent terminals (Fig. 3 and col. 7, line 60-col. 8, line 31); a voice channel between the circuit-switched private branch exchange and the network (col. 8, lines 11-31) where a call inherently includes a voice channel; a control channel between the network spanning heterogeneous call center controller and the network (col. 8, lines 11-31)

where the controller controls the switching of calls over a network; and a voice channel between the packet-switched private branch exchange and the network (col. 8, lines 11-31).

Shenkman does not expressly disclose in the primary embodiment employing a data channel between the packet-switched private branch exchange and the network. However, Shenkman does disclose as prior art transmitting voice and data over the Internet lines (col. 3, lines 50-52) where the Internet lines can be used to provide multimedia systems (col. 2, lines 5-14). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a data channel between the packet-switched private branch exchange and the network in order to permit multimedia communications.

31. Regarding claim 39, Shenkman discloses that the circuit-switched instruction messages include a message to transfer a circuit-switched call to a selected agent terminal (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

32. Regarding claim 40, Shenkman discloses that the agent terminal is coupled to the circuit-switched private branch exchange via the network (Fig. 3 and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

33. Regarding claim 41, Shenkman discloses that the packet-switched instruction messages include a message to transfer a voice over internet protocol call to an internet enabled agent terminal (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

34. Regarding claim 42, Shenkman discloses that the internet enabled agent terminal is connected to the packet-switched private branch exchange via the network (Fig. 3 and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

35. Regarding claim 43, Shenkman discloses that the circuit-switched instruction messages include a message to place a circuit-switched call in a call queue (col. 3, lines 10-15).

36. Regarding claim 44, Shenkman discloses that the circuit-switched instruction messages include a message to apply a telephony resource (agent's phone) to a circuit-switched call (col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

37. Regarding claim 45, Shenkman does not expressly disclose that the telephony resource comprises a message to apply music on hold call treatment; however, Examiner takes official notice that it is well known in the art to play music for a caller while on hold in order to encourage the caller to stay on hold. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to play music for a caller while on hold in order to encourage the caller to stay on hold.

38. Regarding claim 46, Shenkman discloses that the circuit-switched call is a circuit-switched voice call transmitted over the public switched telephone network (Fig. 3 and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

39. Regarding claim 47, Shenkman discloses that the packet-switched private branch exchange supports Internet Protocol telephony (Fig. 3; col. 2, lines 15-30; and col. 7, line 59-col. 8, line 4 and col. 8, lines 9-31).

***Conclusion***

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Uppaluru et al. (USPN 6,324,276) see col. 2, lines 52-57 which discloses queuing calls and playing music while a call is on hold.

41. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600